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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT
CRYSTAL SQUARE FIVE
1755 JEFFERSON DAVIS HIGHWAY
FOURTH FLOOR
ARLINGTON, VA 22202

EXAMINER

AFTERGUT, JEFF H

ART UNIT	PAPER NUMBER
	1733

DATE MAILED: 03/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/913,518	DEBALME ET AL.	
Examiner	Art Unit		
Jeff H. Aftergut	1733		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 2-6-02.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1 and 5-14 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1 and 5-14 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 and 5-14 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Each of claims 1, 13 and 14 recite that the product produced is one which is a “rigid non-porous composite product”. While the original disclosure did support the suggestion that the finished end product was one which was “rigid” (see page 11, line 26, page 13, line 14), there is no mention whatsoever of the formation of a finished end product which is “non-porous”. Note that a finished composite product could be both porous and rigid. There is no requirement and/or suggestion anywhere in the disclosure that the finished end product was one which was “non-porous” and additionally, the exact scope of the term “non-porous” cannot be ascertained.

Applicant was not in possession of processing the composite material to form a rigid, non-porous final product.

Additionally, regarding claim 1, the applicant has amended the claim to recite a step of at least one of cutting up the rigid non-porous continuous composite and “sufficiently softening said continuous rigid non-porous composite material to wind onto a rotating drum”. The applicant is advised that there is no disclosure that one softened the rigid non-porous composite

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prior to winding up on the drum. Such is also considered not to have been within applicant's possession at the time the application was filed.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 5-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant has added to the claims that the product produced by the processing was one which was "non-porous", however there is no mention of the same in the disclosure. The exact nature of the meaning of the same is not understood (the degree to which porosity is present is not clearly defined in the original disclosure and thus the exact scope of the claim cannot be ascertained).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1 and 5-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Francis in view of O'Connor optionally further taken with PCT WO 09/14457 for the same reasons as set forth in paper no. 28, paragraph 2.

With regard to the amended claims, the applicant is advised that the reference to Francis suggested that any degree of compaction would have been provided as desired in order to provide any desired level of thickness and density. The reference to Francis therefore suggested that one skilled in the art would have known to use the heat and pressure to produce a rigid

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composite article. The reference does not expressly state that the finished end product is nonporous, however: (1) as noted above such language was not in applicant's possession at the time the invention was made (i.e. it is new matter), and; (2) production of a nonporous end product in Francis would have been a function of the amount of compaction provided (for which Francis provided a wide range) as well as the amount of potentially adhesive fibers present in the mixture of fibers (enough potentially adhesive fiber must be present to provide a matrix for the finished assembly when heated above the melting point of the same. the applicant is advised in this regard that a wide range for the percent of thermoplastic fibers in the assembly was disclosed and thus the degree of porosity within the finished assembly would have been perceived by Francis. There is no evidence that consolidation with the belts during heating and cooling would have required that the fiber layer remain porous in order to heat and cool the same (such is a conclusion drawn by applicant which is without merit). Additionally, the reference to O'Connor clearly suggested that one skilled in the art would have formed the mat layers as well as the fabric layers from commingled yarn material. Those skilled in the art would have used the same because of the intimate contact between the thermoplastic fiber and the reinforcing fiber in the material.

Response to Arguments

7. Applicant's arguments with respect to claims 1 and 5-14 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that the reference to Francis does not consolidate with heat and pressure to form a rigid non-porous composite material. The applicant is referred to the

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discussions above regarding the same (the 112 first and second paragraphs and the 103 rejection).

The applicant also argues that the reference to Francis did not include at least 40% reinforcing fibers in the finished product and additionally did not incorporate thermoplastic (potentially adhesive) fibers in the fabrics of the operation. Both of these arguments are not persuasive. The applicant is initially referred to column 11, lines 8-16 where the reference suggested that one skilled in the art would have employed various amounts of the potentially adhesive fiber in the finished end product dependent upon the desired characteristics of the final assembly and that the same included 5-45% synthetic resin fiber (potentially adhesive fiber) and preferably included 5-20% synthetic resin fiber (if the finished product was formed from the potentially adhesive, synthetic resin fiber and glass fiber then the amount of glass fiber would have been between 55-95%, preferably between 80 and 95% glass fiber). Clearly, the reference to Francis taught the specified amount of glass fiber (reinforcement) in the finished assembly. Additionally, the applicant is referred to column 7, lines 40-50, where the reference to Francis made it clear that the fabrics which were fed through the operation would have been known at the time the invention was made as containing thermoplastic fiber therein in order to facilitate a bond between the layers of the assembly. Clearly, the fabrics of Francis taught that one skilled in the art at the time the invention was made would have included thermoplastic therein.

The applicant argues that O'Connor failed to teach that one skilled in the art at the time the invention was made would have continuously produced the assembly. O'Connor was not cited for the proposition that one skilled in the art at the time the invention was made would have continuously produced the composite material as such was envisioned by Francis. The reference

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to O'Connor was cited to evidence that those skilled in the art at the time the invention was made would have incorporated a commingled fiber yarn in both the nonwoven layers of Francis as well as the fabric strips therein. The reason one would have provided a commingled yarn and then either chopped the same or woven fabric from the same was that it provided for better contacting between the thermoplastic matrix and the reinforcing fiber than other known techniques for incorporation of the matrix in the assembled fibers. The overriding purpose for use of the inclusion of the thermoplastic in the commingled yarn was to facilitate composite article formation. One skilled in the art would have appreciated that commingled filaments would have been useful in the processing of Francis and would have used the same in order to provide better impregnation of the reinforcing fibers.

The applicant argues that the PCT reference did not express that one skilled in the art would have utilized 40% or more glass fiber. However, the reference need not since the reference to Francis suggested the same.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 703-308-2069. The examiner can normally be reached on Monday-Friday 6:30-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
March 14, 2002